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LIFE EVENTS, WAR AND ADJUSTMENT: LESSONS FOR THE MIDDLE EAST

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This article focused on traumatic stress and adjustment in the Middle East. Conservation of Resources (COR) stress theory was proposed as a template to explain the relationship between traumatic circumstances and subsequent adjustment. According to COR theory, moderate and major life events produce negative psychological, functional, and health sequelae to the extent that *resource loss* is experienced. Resource loss that is developmentally overwhelming, or chronic, or a threat to survival was proposed to produce extreme or prolonged adjustment difficulties. Conversely, the replenishment of resources was seen as alleviating psychological suffering. COR theory was applied broadly to children, adults, civilians, and military personnel.

KEY WORDS: Traumatic stress, stress, war, Middle East, loss, resources.

The connection between traumatic events faced by communities of individuals and their reactions to these events is an important topic for stress researchers and practitioners. Work on stress, in general, has received widespread attention, but work on stressors faced by communities has been much more circumscribed. From a practical standpoint, the occurrence of traumatic community events result in tangible human suffering. For humanitarian reasons, it is desirable to minimize the impact of noxious events. The ability to minimize the impact of noxious events is based upon a claer understanding of the relationship between traumatic events, potential mediating factors, and subsequent adjustment.

This article presents a synthesis of scientific literature concerning the connection between traumatic community events and subsequent individual and group adjustment. In keeping with the focus of the special issue, this integration centers on life events and adjustment in the Middle East. Because of the paucity of research on stress in the Middle East, we will discuss published reports based upon both Middle Eastern and North American samples. Our intent is to attempt a more theoretical understanding that integrates these rich sources of information.

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Even as we speak of the Middle East, we must emphasize that we are referring to a great variety of peoples and cultures. The Middle East contains Muslims, Christians, and Jews. Muslims are defined by their belief in various sects and doctrines, no less than are evidenced in the divisions between Catholics and Episcopalians in Christianity. In the Middle East, not all Arabs are Muslim, and many Muslims are not Arabs. Some nations had advanced universities, mathematics, and medicine long before Europe's enlightenment, and other regions have been without formal educational institutions or learning centers and remain so. About half the Jews in Israel are descendent of, or were themselves born, in Arab countries, and about half are of European descent. Regional differences also abound. Morocco is thousands of miles from Iraq, some areas are heavily urbanized and others are characterized by vast expanses of desert.

These differences and their different histories have shaped people and nations in different molds. We would be simplistic to think that we could place all this diversity in one basket and call it one thing, but neither is it in the scope of this article to discuss each subculture or nation individually. Rather, we will proceed cautiously in generalizing our conclusions across cultures and we will try to make some account for the diversity of the people about whom we write.

The remainder of this article is organized around several conceptual areas. We begin by presenting Conservation of Resources (COR) stress theory as a template for understanding the linkages between the environment and adjustment. Next, we consider developmental influences on adjustment. Then, we consider the cumulative role of life events in determining adjustment. Following this, studies of civilian and military samples are reviewed in search of qualitative predictors of psychological distress. Finally, we draw conclusions for research and clinical applications.

ESTABLISHING A CONCEPTUAL FRAMEWORK

Despite the wide popularity of appraisal models of stress, in particular the work of Lazarus (1984) and Lazarus and Folkman (1984), we are proposing a revised conceptualization of stress and adjustment. The need for this revision is based upon limitations of stress appraisal models. These limitations have been noted and detailed by a number of researchers (Hobfoll, 1989).

It is our position that appraisal models of stress rely upon overly complex and circular definitions that are not empirically testable (i.e., given to empirical rejection). The problem with appraisal models lie in the *degree to which* cognitive appraisal is emphasized in defining the nature of stressful events. Events are defined as stressful based upon the *perception* of the person. Similarly, coping capacity and psychological adjustment are defined as positive or negative based upon the *perception* of the same person. Thus, appraisal models confound the cause of distress (i.e., environmental demands) with the effect (coping responses and level of distress) upon the individual. This circularity makes it impossible to clearly determine cause and effect relationships. From a practical stand point, underemphasizing the *objective nature* of environmental stressors may limit efforts to change conditions that cause human pain and suffering.

Although we take issue with the emphasis placed on appraisal in the stress

appraisal model, we see critical value in the transactional model that is also an integral aspect of Lazarus and Folkman's (1984) overall theory. The transactional model emphasizes that the process of stressful event (objectively occurring), event perception, reaction, action, reappraisal, and event change occur in intricate cycles. There may be a clear event beginning the cycle, but once initiated it resolves in a complex fashion. This can be likened to a hall of mirrors where the original image is transferred and translated by light, shapes, and placement of the mirrors involved. Unlike the hall of mirrors, however, the original event also shapes future events that follow in the original event's wake. As we present COR theory, this transactional process will highlighted.

COR theory provides a useful alternative framework for examining individual, group, and community adjustment following a range of adverse life experiences (Hobfoll, 1989). While recognizing the importance of both personal and environmental characteristics, the theory places emphasis upon *objective definitions* of person-environment transactions likely to result in psychological distress. The causes of distress are viewed as objective environmental events (e.g., loss of a job, illness of a child) placing *real demands* upon the people involved. Using this objective definition, the causes of distress are not confounded with the more subjective and complex transactional processes of coping and adjustment that follow.

A defining principle of COR theory is that the experience of resource loss is central to the experience of psychological distress (Hobfoll, 1989). Resource loss is depicted as having a greater impact that resource gain, such that the effects of loss and gain are far from equivalent in opposite effect. Three forms of resource loss are basic to the stress process. *First*, resource losses can be direct as is the case when a person loses a family member due to death. *Second*, resource losses can be anticipated as occurs when citizens worry about the future possibility of military conflict. *Third*, resource losses may represent failure to receive anticipated returns as occurs when the investment of time and effort in work and home activities does not result in the life stability that was anticipated. COR theory suggests that one of these three forms of resource loss (direct, anticipated, or failed returns) is necessary for the experiencing of psychological distress (Hobfoll, 1988, 1989).

COR stress theory identifies *resources* as internal and external characteristics that individuals maintain and accumulate in service of having coping options and adjusting well (Hobfoll, 1989). Thus, the loss of resources (direct, anticipated, or failed returns) serves to objectively define the basis for reduced coping capacity and increased psychological distress. The emphasis of COR theory upon proactive efforts to accumulate and maintain internal and external resources is unique. Appraisal models do not explicitly state how (or why) people act in the absence of stressful demands. The COR model suggests an orientation towards personal growth and achievement.

A second principle of COR theory is that to prevent resource loss, to maintain resources, and to build resources people must invest other resources. For example, time, energy, and self-esteem must be invested to promote a good marriage or work success. Social support, another important resource, must similarly be used in order to protect threats to other critical resources, such as self-esteem and sense of mastery. Because resources must be invested to protect, build, and maintain resources, Schönflug (1985) emphasizes that coping comes at a cost, (as the act

coping may cause resources to be risked or used up). This principle also suggests that those who are more richly resource endowed will have more resources available for coping, whereas those who lack resources are more vulnerable to stress.

COR theory further proposes that resource loss tends to spiral as is the case when regional economic downturns more harshly impact the economically disadvantaged. This follows because since both stressful events and the act of coping potentially deplete resources, the individual, group, or community have a decreasing armament of resources to combat ongoing stressors. Also, since stressful events are often actually sequences of related stressors, the initial events in the chain deplete resources when inevitable challenges will follow. Resources can also positively spiral to build a buffer against life demands as happens when social connections may assist an individual in locating employment (or perhaps borrowing money) in difficult economic times. Because loss has a greater impact than resource gain, however, loss spirals occur faster and with greater intensity than gain spirals. This is a critical point. In most circumstances resources are built after years of hard work and investment, whereas they are often lost in traumatic circumstances in moments.

The breadth of resources identified by COR stress theory make this model useful in understanding adjustment under a wide range of life circumstances (Freedy, Shaw, Jarrell, & Masters, 1992; Hobfoll, 1989; Hobfoll & Lilly, 1993). These four resource categories are identified: *objects* — that are possessions with functional or appraised value such as, a home, a car, and clothing; *personal characteristics* — that are aspects of the self in relation to the world, including a sense of control, a sense of predictability, social and job skills, and self-esteem; *conditions* — that identify key social roles, including, employment, marriage, organizational memberships; and, *energies* — that are used to obtain other resources and include, time, money, and information. In general, stressful life events are proposed to produce loss (direct, anticipated, or failed returns) in at least some of these resource categories.

Although COR theory does not emphasize individual perceptions, commonly held values are highlighted. Stress occurs when these basic values are threatened or lost because these values are central to a sense of identity. For example, resource loss occurs when an individual desire for self-determination or free religious expression is thwarted by official opposition. Many values are widely held in a culture (Schwartz & Bilsky, 1987) and, indeed, the values held by a people to a large measure define the culture. Some of the most universally held values are freedom of self-determination, religious freedom, and preservation of a sense of honor and dignity. Rollo May (1958) wrote that more anxiety is evoked over threat to loss of such values than threat to life itself. An understanding of this element of COR theory may, itself, be one of the most important notions for an understanding of stress in the Middle East.

Our contention is that COR theory provides a template for understanding the traumatic event to adjustment puzzle. Life events occurring in the Middle East, whether moderate (e.g., crowded living conditions) or major (e.g., military conflict), will result in negative psychological states or functional or health impairment to the extent that the event results in some form of resource loss (direct, anticipated, or failed returns). If the resource(s) affected can be relatively easily replenished (e.g., losing your job amidst a good economy), then psychological distress experienced will be relatively moderate and short lived. However, if the resources

impacted are not easy to replenish (e.g., death of a loved one due to military combat), then psychological distress and functional impairment is likely to be severe and prolonged. It is a major contribution of COR theory that these hypotheses are empirically testable.

DEVELOPMENTAL CONSIDERATIONS

Traumatic events occur at any point during the life span. This fact necessitates the importance of taking a developmental view of the connection between life events and subsequent adjustment. Parents are generally considered responsible for shielding children from developmentally overwhelming challenges. Based on COR theory, we propose that parents seek to insure a match between a child's resources and existing environmental demands. A consistent match maximizes the prospect that a child will experience optimal growth in terms of key resource areas, particularly personal characteristics (e.g., self-efficacy, self-esteem) and condition resources (e.g., family relationships, peer relationships). The bedrock of childhood psychosocial development appears to be gradually increasing autonomy as reflected in increased pools of valued resources (Bandura, 1982; Bowlby, 1969; Rogers, 1977).

Milgram (1990) points out that no epidemiologic research has been conducted to document the base rate of stressful life events experienced by Israeli children. Similarly, we located no reports of epidemiologic research to document typical life events experineced by children of Arab descent within the Middle East. Based on this sparse information, clinical observation and educated speculation prevails. It is generally agreed that children who are exposed to the threat of war, enemy occupation, and war-related events experience unacceptably high levels of stressors during their formative years of psychosocial development.

Understanding the potential developmental impact of undue levels of stressful life events upon children is important. While data concerning Middle Eastern samples are lacking, other lines of research are instructive. For example, Garbarino, Kostelny, and Dubrow (1991) provide an excellent literature review concerning the linkage between community and communal violence and psychosocial development. In this review, it is contended that circumscribed acute danger (e.g., a single isolated encounter with violence) often has a minimal lasting impact when children are offered adequate parental support and guidance. Chronic danger (e.g., living within a neighborhood prone to violence), however, is viewed as potentially having more negative developmental consequences. Garbarino et al. (1991) reason that parental skills and resources are usualy sufficient to limit the impact of circumscribed acute threats, while major acute or major chronic threats can be beyond the influence of parents or the family unit. The following factors have been suggested as supporting positive adjustment following confrontation with either acute or chronic developmental challenges: prior cognitive competence, prior success in meeting environmental challenges, stable attachment to parents (or primary care givers), and positive social attachments outside of the family (Garbarino *et al.*, 1991).

A second area of developmental research is relevant to the current discussion. Several investigators have considered the resilience of "high risk" children to the development of psychopathology (Garmezy, 1991; Rutter, 1985; Werner, 1989).

Within this line of research, the following types of life circumstances are used to identify children at developmental risk: perinatal stress, poverty, parental illness (e.g., alcoholism, mental illness), familial discord, and other social adversities. Resilience factors are those characteristics that allow "high risk" to flourish in the face of adversity.

The work of Emmy Werner and her colleagues illustrates the type of insight provided by research concerning developmental resiliency (Werner, 1986, 1989, 1992; Werner & Smith, 1982). This work is based upon following a cohort of 698 infants born in Kauai, Hawaii, from birth through adulthood. It was found that one-third of "high risk" infants developed into ". . . competent, confident, and caring young adults" (Werner, 1989). Three types of protective factors were noted as promoting optimal development among "high risk" children: (a) personal attributes, including, activity level, sociability, intelligence, good communication skills, and internal locus of control; (b) emotionally supportive family ties (e.g., from parent, sibling, spouse, or mate); and (c) community resources (e.g., school, work or church) that promote individual competence (Werner, 1989).

The aforementioned developmental research can be viewed as consistent with the basic premises of COR theory. Recalling COR theory emphasis on the maintenance and accumulation of resources, we propose that personal social successes are crucial to optimal psychosocial development. Personal successes (e.g., making good grades at school) and social successes (e.g., popularity with peers at school) lead to the bolstering of personal characteristic resources (e.g., self-esteem, self-efficacy) and condition resources (e.g., adequate social ties). Armed with adequate internal and external resources, the child is likely to possess the necessary competence and confidence to meet future environmental challenges.

CUMULATIVE EXPOSURE TO LIFE EVENTS

Many studies fail to assess the role that a range of life events may play in determining adjustment. Instead, these studies focus on the relationship between a single life event (e.g., an illness within the family) and subsequent psychosocial outcome (e.g., self-reported anxiety). While such simplicity makes the interpretation of results easier, the research bears only a loose resemblance to the life experiences of participants.

In the Middle East, people may be particularly likely to be bombarded by a series of ongoign *moderate life events* (e.g., inflation, scarcity of natural resources, crowded or otherwise poor living conditions) (Hobfoll, 1988). A full understanding of the determinants of individual adjustment requires a careful assessment of a range of moderate life events that may impact individual adjustment. Whereas we have suggested that moderate life events can serve to stimulate personal development, there are limits. COR theory suggests that when resources are chronically threatened or depleted by living conditions, coping options can be reduced and psychological distress may result (Hobfoll, 1989). The potential role of cumulative resource depletion in determining individual psychosocial adjustment should not be ignored.

Traumatic life events (e.g., military conflict, violent crime) may also exert a cumulative effect on individual adjustment. Within many areas of the Middle East, war and terrorist acts are a fact of life. War conditions may exacerbate the intensity

of existing moderate life events (e.g., shortages of goods and services, inflation). Further, armed conflict introduces the possibility of threats to safety. Under conditions of war and military occupation, threats to civilians can be horrendous. One or more family members may be in peril due to military service. In the case of protracted armed conflict, extreme suffering is possible.

Several accounts document civilian suffering during military conflict. A study of Southeast Asian refugees seeking mental health treatment, found that ten traumatic experiences (e.g., sexual abuse, witnessing death, witnessing torture) and two torture experiences were the average number of such experiences (Mollica, Wyshak, & Lavelle, 1987). These experiences had occurred during a war, an escape period, or in refugee camps. In the second author's experience with adolescent, Jewish Ethiopian refugees to Israel, similar accounts were told about their journey across the Sudan to the departure point to Israel. Recent civilian accounts in Kuwait, following the invasion of Iraq suggest similar traumatic exposure (Al-Khawaj & Frah, 1992; Frah & Al-Khawaj, 1992).

Under conditions of chronic suffering, human beings who find meaning or a purpose in the suffering appear to be most resilient (Frankl, 1963). From the perspective of COR theory, such beliefs become a type of resource (personal characteristic) that can be used in the service of positive adaptation. When such beliefs form the basis of bonding and sharing with other people (present or absent, dead or alive), these beliefs might also form the basis of social resources (i.e., group affiliation). Despite the positive service that enduring beliefs can provide, it has been suggested that excessively rigid religious or political beliefs may constitute a paradoxical resource (Garbarino et al., 1991). The paradox is that while strongly held beliefs may allow people to endure suffering, these same beliefs may mitigate against developing empathy or trust between opposed groups. This state of affairs assuredly perpetuates conflicts between opposed groups in the Middle East.

MENTAL HEALTH RISK FACTORS

Civilian populations

We have previously suggested that moderate life events (e.g., unpleasant living conditions, changing social habits) may be related to psychological distress. Our argument was that moderate life events must result in resource loss for an negative psychological, functional, or health sequelae to ensue. But are existing research findings consonant with this point of view? We believe so. It has been found that life change or readjustment, per se, is not psychologically taxing. Rather, it is the negative valence of change associated with moderate life events that is responsible for creating psychological and physical symptoms (Mueller, Edward, & Yarvis, 1977; Vinokur & Selzer, 1975). From the perspective of COR theory, this negative valence change is conceptualized as reflecting *resource loss* (direct, threatened, or failed returns). Thus, only when moderate life events result in the resource loss will the result be a negative psychological state.

The occurrence of war may set into motion a series of moderate to major life events for the civilian population. This process has been documented in empirical research. For example, a large representative sample of Israeli adults (n = 11,944) was interviewed 11 times across a time span before, during, and following the 1982

Israel-Lebanon War (Hobfoll, Lomranz, Eyal, Bridges, & Tzemach, 1989). Newspaper headlines were were used as an objective indicator of ongoing life events. A self-report depression scale was used as the outcome measure of interest. The onset of the conflict and a massacre of Palestinian refugees were associated with the highest levels of civilian depressive symptoms. COR stress theory suggests that these time periods must have been associated with maximal levels of resource loss (e.g., separation from family, scarcity of goods and services, violation of humanitarian beliefs due to the massacre). Symptom reports diminished with time, suggesting the ability to replenish resources in the midst of stressful circumstances. A follow-up study during the period of the Gulf War indicated a similar trend, with greatest distress during the most intense period of missile-threat to Israel (Lomranz, Hobfoll, Johnson, Eyal, & Zemach, 1994).

A separate line of research concerns the adjustment of women who had family members performing military duties during the 1982 Israel-Lebanon War (Hobfoll & London, 1986). It was found that women high in the personal resources of mastery and self-esteem experienced fewer feelings of emotional distress. However, women high in the social resources of intimacy and social support experienced more emotional turmoil. Upon debriefing the participants, it was found that social contact actually exposed the women to higher levels of resource loss in the form of threatening information and tangible demands from social networks. In sum, war related life events that reduced available resources resulted in emotional distress.

Saigh reviewed the effects of the 1982 Israel-Lebanon War upon Lebanese adolescents (Saigh, 1984a) and university students (Saigh, 1984b). It was found that during the period of armed conflict, all participants (regardless of evacuation status) reported heightened exposure to potentially threatening experiences (e.g., crossing Beirut, exposure to sniper fire). However, there were no corresponding increases in self-reported psychological distress between the pre- and post-invasion time period (approximately six months). Saigh (1984a, 1984b) argues that the cessation of environmental threats was responsible for the null findings. Other researchers have suggested that study participants were never exposed to the types of hardships likely to result in intense psychological distress (Heimberg, 1985; Keane, 1985).

Although it is speculative, Saigh's results can be considered from the perspective of COR theory. The affluent participants in his study might have been shielded from resource loss by parental and family resources (e.g., family ties, a safe place to stay, money), thus reducing vulnerability to psychological distress. Alternatively, their losses may have occurred prior to the study in a country already internally war-torn. The period of war with Israel may have actually been a stabilizing period for many, whereby their Israeli allies (for some) entered to help and for others whereby their Israel enemies gave them a cause around which to mobilize. While based on conjecture, the above possibilities suggest the potential complexity of resource loss and gain within war torn regions. One goal of this article is to encourage application of COR theory to empirical studies of community stress within the Middle East.

Military populations

Although civilians are exposed to actual and threatened loss during war, military personnel are typically more directly vulnerable to loss experiences. This fact is

reflected in two excellent lines of research. One body of research concerns the experiences of American Vietnam veterans. The second body of research concerns the experiences of Israeli combat participants.

Early studies of Vietnam veterans suggested that mental health effects were minimal (Laufer, Gallops, & Frey-Wouters, 1984). When adverse consequences were discovered, poorer pre-military adjustment was generally considered causative (Foy, Resnick, Sipprelle, & Caroll, 1987). This minimal impact view point has changed, with many American mental health professionals recognizing that war experiences rather than pre-military adjustment are responsible for emotional suffering (Foy & Card, 1987; Keane & Fairbank, 1983).

A series of studies concerning the Vietnam War have appeared in American professional journals. One clear finding from these studies concerns the complexity of life experiences associated with military service in a war zone. In particular, certain experiences are known to be associated with heightened mental health risk. The following risk factors appear particularly salient: length of Vietnam service, service within a combat zone, participation in combat, witnessing death, threat to life, being wounded, physical deprivation, responsibility for the death of enemy military, responsibility for the death of enemy civilians, participation in or witnessing of abusive violence (war crimes, atrocities), and the loss of a sense of meaning or control (Foy & Card, 1987; Grady, Woolfolk, & Budney, 1989; Jordan et al. 1991; Lund, Foy, Sipprelle, & Strachan, 1984;. Yehuda, Southwick, & Giller, 1992).

Learning theory has been proposed as an explanation for the linkage between combat exposure and debilitating levels of anxiety (Keane, Zimering, & Caddell, 1985). The idea is that aversive combat experiences serve as a cues (US) that produce debilitating levels of anxiety (UR). Subsequently, reminders of combat gain the property (CS) of producing similar levels of anxiety (CR). Veterans may avoid contact with painful reminders of combat (CS) in order to minimize feeling anxious (CR). Reports of physiological reactivity among posttraumatic stress disorder (PTSD) sufferers upon exposure to combat related cues (e.g., audio tapes of combat scenes) support the conditioning explanation (Pallmeyer, Blanchard, & Kolb, 1986; Pittman, Orr, Forgue, Altman, de Jong, & Herz, 1990).

Learning theory provides only *a partial explanation* for how and why combat can produced negative emotional consequences. We propose that COR stress theory provides further insight into the linkage between combat experiences and psychological adjustment. It seems clear that many aversive combat experiences are associated with actual or threatened resource loss (e.g., possible loss of life or limb, loss of social cohesion within and outside of battle context, loss of control, loss of meaning, physical deprivation). Upon returning home, Vietnam veterans faced an ambivalent, if not hostile, political and social environment. The resulting social alienation and self-doubt, certainly reflect the actual or threatened loss of personal and social resources during a critical phase of psychosocial development (late adolescence/early adulthood). Consistent with these arguments, low levels of social support have been associated with negative mental health outcomes among Vietnam veterans (Keane, Scott, Chavoya, Lamparski, & Fairbank, 1985).

Research concerning Israeli combat veterans also provides insights regarding the linkage between combat and adjustment. Similar to studies of Vietnam veterans, these studies find that the intensity of battle is related to negative mental health outcomes (Z. Solomon, Mikulincer, & Hobfoll, 1986, 1987).

Research concerning Israeli combatants also outlines other factors that may play a role in determining personal adjustment. One area of inquiry concerns the linkage between level of functioning during combat and subsequent adjustment. In particular, it has been determined that under conditions of intense battle some combatants will become intensely anxious and unable to fulfill their duties. These immediate mental health casualties have been termed cases of combat stress reaction (CSR). The intensity of combat experiences appears to increase risk for experiencing CSR (Z. Solomon et al., 1986). Furthermore, CSR is associated with a greater scope and severity of mental health symptoms as long as three years following combat experiences (Z. Solomon, 1989).

Questions arise regarding the relationship between CSR and the availability of needed resources. One study considered this question within the context of battle conditions (Z. Solomon et al., 1986). In this study, it was determined that the lack of certain resources increased the risk for CSR. In particular, low levels of officer support (emotional and instrumental) was associated with increased risk for CSR. In addition, high battle intensity and low levels of officer support were associated with reports of feeling lonely. In turn, feelings of loneliness heightened the prospect of developing CSR. These findings support the COR model proposition concerning the relationship between resource loss (i.e., low support, loneliness) and negative mental health outcomes.

One additional study concerning the relationship between combat, resources, and adjustment will be considered. Z. Solomon, Mikulincer, and Avitzur (1988) examined a group of soldiers who suffered CSR during the 1982 Israel-Lebanon War. Participants completed questionnaires two and three years following the war. The relationship between PTSD symptoms, personal resources (locus of control), social resources (social support), and coping was examined. A key finding was that higher social support and a more internal locus of control was associated with less severe symptomatology. Consistent with COR theory, the availability of adequate personal and social resources was associated with healthier adjustment.

CONCLUSIONS

There is a great need for theory driven research that leads to a clear understanding of the relationship between life events and subsequent adjustment. Several of the studies we reviewed provided rigorous tests of elements of COR stress theory (e.g., longitudinal designs, large samples, a prior specification of resources and outcome variables). However, a number of the studies reviewed were not clear tests of COR theory. These studies were interpreted on a post hoc basis as being consistent with the tenets of COR theory. Additional a priori efforts to test elements of COR theory are desirable. Beyond theory development, new knowledge may suggest interesting ways to minimize sources of human suffering.

An additional line of research, would involve the development and evaluation of intervention efforts based upon COR theory. Most current intervention efforts focus on demonstrating the efficacy of cognitive-behavioral treatments for trauma induced psychological suffering (Fairbank & Brown, 1987; S.D. Solomon, Gerrity, & Muff, 1992). Despite evidence for the efficacy of cognitive-behavioral approaches, there is also a growing recognition by mental health professionals of the need for more broadly based approaches (Keane, 1993). By targeting the enhance-

ment of a broad range of resources (e.g., increasing social networks, providing success experiences, providing access to basic housing, goods, and services) it may be possible to reduce negative psychological states.

Applied efforts provide a final means to reduce human suffering. These efforts can be defined as either microscopic or macroscopic. Microscopic approaches include traditional approaches to the psychological treatment of individuals. While microscopic efforts are clearly important and often successful, the impact on *causes of resource loss* may be minimal. Macroscopic approaches include efforts directed at producing larger changes (e.g., changes in government policy, changes in military practices) that reduce the occurrence of environmental threats (e.g., inflation, unemployment, pollution, war). We suggest that mental health professionals have an important role to play in advocating for larger scale changes because some sources of resource loss are clearly beyond the power of individual control.

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